

Claims

What is claimed is:

1. A radiation curable composition comprising:

(i) at least one radiation-curable oligomer; and

5 (ii) 0-20 wt%, relative to the total weight of the composition, of monofunctional reactive diluents;

wherein said composition has

a viscosity of less than 10,000 cps at 25 °C; and, after cure,
a secant modulus of less than 5 MPa.

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2. The composition of claim 1, comprising less than 10 wt% of said monofunctional reactive diluents.

15 3. The composition of claim 1, wherein said composition comprises less than 5 wt% of said monofunctional reactive diluents.

4. The composition according to any one of claims 1-3, wherein at least 50 wt% of said monofunctional reactive diluents is absent an aromatic ring.

20 5. The composition according to any one of claims 1-4, wherein said composition has a viscosity of less than 3,000 cps in at least part of the range 40°C-60°C.

6. The composition according to any one of claims 1-5, wherein a coating obtained by curing said composition has a glass transition temperature of less than -30 °C.

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7. The composition according to any one of claims 1-6, wherein said composition comprises less than 5 wt%, relative to the total weight of the composition, of silicone oligomers.

30 8. The composition according to any one of claims 1-6, wherein said composition is absent any silicone oligomers.

9. The composition according to any one of claims 1-8, comprising an oligomer having ethylene oxide and butylene oxide moieties.

10. The composition according to any one of claims 1-9, comprising an oligomer having diisocyanate residues, wherein at least 50 mole% of the diisocyanates used to form the oligomer is absent a cyclic structure.

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11. The composition according to any one of claims 1-10, comprising an alkoxylated aliphatic diluent.

12. The composition according to any one of claims 1-11, comprising a silane

10 adhesion promoter.

13. The composition according to any one of claims 1-12, wherein said composition, after cure, has a secant modulus of less than 1.5 MPa.

15 14. A radiation-curable composition comprising:

- (i) a radiation-curable oligomer;
- (ii) 0-45 wt% of one or more reactive diluents;

wherein

said oligomer comprises diisocyanate residues;

20 at least 50 mole % of the diisocyanates used to form said oligomer is absent a cyclic structure; and

said composition has a viscosity of less than 10,000 cps at 25 °C.

15. The composition of claim 14, wherein at least 65 mole% of the diisocyanates 25 used to form said oligomer is absent a cyclic structure.

16. The composition according to any one of claims 14-15, wherein said composition comprises less than 10 wt% of monofunctional reactive diluents.

30 17. The composition according to any one of claims 14-16, wherein said composition, after cure, has a secant modulus of less than 5 MPa.

18. The composition according to any one of claims 14-17, wherein said composition has a viscosity of less than 3,000 cps in at least part of the temperature 35 range 40°C-60°C.

19. A coated optical fiber comprising a coating obtained by curing the composition according to any one of claims 1-18.